

# PROCESSING METHODS AND FORMULATIONS TO ENHANCE STABILITY OF LEAN-NO<sub>x</sub>-TRAP CATALYSTS BASED ON ALKALI- AND ALKALINE-EARTH-METAL COMPOUNDS

## Abstract

The present invention provides a coarsening resistant automotive exhaust catalyst composition. The composition of the invention comprises a metal or metal-containing compound and a component having alkali metal or an alkaline-earth metal ions bonded to a conjugate base oxide of an inorganic acid. The inorganic acid for which the base oxide is conjugate has a  $K_a$  such that the automotive exhaust catalyst composition resists phase transitions that reduce surface area. The present invention also provides a NO<sub>x</sub> trap which incorporates the exhaust catalyst composition of the invention. Finally, a method of inhibiting coarsening in automotive exhaust catalyst is also provided.